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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,408	05/01/2001	Scott Baggs	10004917-1	4007

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

COUSO, YON JUNG

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/846,408	Applicant(s) BAGGS, SCOTT	
	Examiner Yon Couso	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 20-26 and 33-35 is/are allowed.
- 6) ☒ Claim(s) 14-19, 27, 28, 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's arguments filed October 4, 2004 have been fully considered but they are not persuasive.

a. The applicant argues that the Mancuso reference does not teach or suggest means for smoothing at least one data value associated with the plurality of picture elements in the identified sub-portion of the at least one image frame because Mancuso's smoothing operation removes noise introduced by taking derivatives of pixels. The examiner notes that Mancuso discloses claimed limitation means for smoothing (column 3, lines 15-18) at least one data value associated with the plurality of picture elements (an edge pixel is associated with eight surrounding pixels in 3X3 window) in the identified sub-portion of the at least one image frame (image edges reads on the identified sub-portion at column 4, lines 13-41).

b. The applicant argues that the Mancuso reference does not teach determining when the absolute value of the difference between the maximum picture element data value and the test result exceeds a predetermined threshold. The examiner noted that the newly added limitation, determining when the absolute value of the difference between the maximum picture element data value and the test result exceeds a predetermined threshold, is not taught in the originally filed specification. See paragraph 2 below.

c. In view of the arguments, the rejection under 35 USC 102 (e) made to claims 20 through 23 has been withdrawn.

2. Claims 27 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter,

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly added limitation, determining when the absolute value of the difference between the maximum picture element data value and the test result exceeds a predetermined threshold, is not taught in the originally filed specification. Paragraph 61 in the specification reads "The region discontinuity identifier 440 may be configured to generate the absolute value of the difference between both the min. and the max. picture element data values within the region with the mean picture element data value for the region." Paragraph 71 in the specification reads "The method for detecting image artifacts 608 may then check whether the absolute value of the difference between the picture element data value minimum value for the region and the mean value for the region exceeds the magnitude of the image artifact detection threshold as indicated in the query of step 708." Paragraph 72 in the specification reads "Similarly, the method for detecting image artifacts 608 may then check whether the absolute value of the difference between the picture element data value maximum for the region and the mean value for the region exceeds the magnitude of the image artifact detection threshold as indicated in the query of step 712." However, nowhere in the specification discloses 'determining when the absolute value of the difference between the maximum picture element data value and the test result exceeds a predetermined threshold'.

Similar argument is applicable to claim 28.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 14-19, 30, 31, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Mancuso et al.

The arguments advanced in paragraph 1 above as to the applicability of the reference have been incorporated herein.

As per claim 14, Mancuso teaches an image processing system suited for post-processing compressed and decompressed images, the system comprising: means for analyzing data associated with a plurality of picture elements comprising at least one image frame to identify portion of the at least one image frame that contain image artifacts (column 2, lines 45-46 and column 4, lines 4-12); means for smoothing at least one data value associated with the plurality of picture elements in the identified sub-portion of the at least one image frame (column 3, lines 15-18 and column 4, lines 13-41); and means for assembling an image artifact reduced image comprising smoothed picture elements (output in figure 1).

As per claim 15, Mancuso teaches means for analyzing comprises performing at least one statistical test on the picture element data values on a sub-portion of the at least one image frame (column 2, lines 46-51).

As per claim 16, Mancuso teaches the means for smoothing comprises mathematical combination of a picture element of interest with an adjacent picture element in a first direction to form a first smoothing result, followed by a mathematical combination of the picture element of interest with an adjacent picture element in a second direction using the first smoothing result for the picture element of interest data value for those cases where the picture element of interest is adjacent to a block as defined by a block sensitivity value (column 4, lines 14-41).

As per claim 17, it would have been inherent for modified picture element data to supercede unmodified picture element data because modified picture element data value is the latest computed picture element data and moreover, it is the enhanced value of the unmodified picture element data.

As per claim 18, Mancuso teaches at least one statistical test comprises determining the mean picture element data value on a sub-portion of the at least one image frame (column 4, lines 29-33).

As per claim 19, Mancuso teaches the mathematical combination of a picture element of interest with an adjacent picture element comprises determining the average data value of the picture element of interest and the adjacent picture element and updating the data value of the picture element of interest with the determined average (column 6, lines 37-41).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by

Lakshminarayanan et al.

The newly amended portion in the claim has not been considered because it lacks support in the original specification.

As per claim 27, Lakshminarayanan teaches a method for identifying image artifacts introduced in a compressed and decompressed sub-region of an image, comprising: performing at least one statistical test over a plurality of picture element data values comprising the sub-region to generate a test result (column 8, line 55-column 9, line 9); determining an extrema element data value for the sub-region (column 9, lines 10-19; and determining when a mathematical combination of the maximum picture element data value and the test result exceeds a predetermined threshold ($\min(\delta I)$ reads on this).

5. Claims 1-13, 20-26, and 33-35 are allowed.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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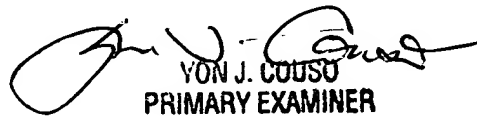
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YJC



YON J. COUSO
PRIMARY EXAMINER

January 18, 2005